Method and Apparatus for Watermarking Wavetable Synthesis Architectures

Abstract

5   A method, an apparatus, and a computer program product for digital audio watermarking of wavetable (WT) format audio, including downloadable sounds (DLS) (110), are disclosed. Correspondingly, a method, an apparatus, and a computer program product for extracting watermarks (126, 552) from a digital audio watermarked WT audio (162, 510) are disclosed. In particular, a digital audio

10   watermark (126) is embedded (140, 130) in both articulation parameters (122) and sample data (124) of a DLS (110). A finite automaton module (220) is used to implement adaptive coding (130) of the sample data (124). Virtual parameters (430) are generated for information hiding (140) applied to the articulation parameters (122). Optionally, playback of the WT (152) can be limited by an embedded control

15   signal. Brief overviews of MIDI and DLS are provided.

Fig. 1